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NEW AND EASY METHOD
OF GIVING
MERCURY,
TO THOSE AFFECTED WITH THE
VENEREAL DISEASE.

TO WHICH IS ANNEXED
A NEW THEORY
OF THE
ACTION of this METAL

ON THE
SALIVARY GLANDS.

Translated from the LATIN

OF

JOSEPH JAMES PLENCK,
Professor of SURGERY and MID-WIFERY,
at VIENNA.

BY

WILLIAM SAUNDERS, M. D.

Hic est, aut nusquam, quod quaerimus.

HORAT.

L O N D O N :

Printed for E. and C. DILLY in the POULTRY.

MDCCLXVII.

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OF GIVING

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TO WHICH IS ADDED

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ACTION OF THE METAL

ON THE

SEALING GLANDS

THESE



JOSEPH JAMES PHENIX

PHARMACEUTICAL WORKS

100 N. 3RD ST.

WILLIAM SAUNDERS M.D.

THEY, out of hand, and sometimes
Horrat.

LONDON

Printed for B. and C. DILLY in the Strand

MCCCLXXII

[From One Shilling and Sixpence]

Advertisement.

I Might have delayed the publication of this translation, untill I had finished some experiments and observations, I am now engaged in making; however as the original has been so much admired by many of the most eminent of the faculty in London; By the desire of some of them, I have litterally translated it.

I shall at present, only observe that the performance has already engaged the attention of all those who have seen it, and it is of no small consequence to be able to cure so inveterate a disease in all its stages, without injuring the constitution, by exciting salivation, and other such violent and dangerous evacuations,

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TO
LUKE WAYMAN, M. D.

MEMBER OF THE
ROYAL COLLEGE OF PHYSICIANS,

IN LONDON,

THIS TRANSLATION IS

WITH

RESPECT AND GRATITUDE

INSCRIBED,

BY HIS MOST OBEDIENT

AND

HUMBLE SERVANT

WILLIAM SAUNDERS.

A

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LUKE W. A. M. D.

MEMBER OF THE

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WILLIAM SAUNDERS

THE AUTHOR'S PREFACE.

I Imagine it will seem wonderful to many, that quicksilver, a metal next to gold in specific gravity, can admit of an entire union with vegetable gum, so as not to be barely mixed with it, but to be so thoroughly extinguished by it, and so firmly attached to it, as for both to remain together for some time suspended in water, and when a sediment takes place, both to fall down together, and never separate.

THAT this is really the case, appears from a very simple experiment, and the more simple an experiment is, it becomes the more obvious and the less subject to fallacy.

EXPERIMENTS of whatever kind are of themselves useful: for altho' they may bring no other advantage, yet they free the mind from prejudices; they illucidate what would otherwise be obscure; they distinguish doubt from certainty; they restrain the licentious-

nels of fiction; they give entertainment from the variety of phenomena they exhibit; they excite the mind to farther tryals; and last of all, they extend the limits of science.

BUT much more useful are such experiments, which, besides amusing the learned, redound in a public manner, to the good of our fellow citizens. Experiments either medical, chirurgical, or œconomical, have chiefly this effect,

Our experiments here are of such a nature, which altho' they may of themselves be curious, yet that alone would never have impelled me to write, if I had not found from a variety of tryals; that their use was very extensive. While indeed I saw, from repeated observations, that a very mild and innocent remedy, could be prepared from Mercury, subdued by vegetable gum, when, besides I perceived that it was very useful to those affected with the venereal disease, and therefore that it was a medicine of so great efficacy in those cases.

I thought I should be wanting in my duty, as a member to society, if I delayed the publication of it any longer

As I am by no means rich, I might have consulted my own advantage more, I might have made use of a sordid prudence, by keeping it as a secret, and then perhaps it
would

would have been more profitable. I might have followed the well known examples of KEISER, who has become rich by concealing the composition of his pills, tho' less efficacious; or of HERENSWAND, LANGHANS, HILL, and other such illustrious quacks, and thus have privately laughed in my own sleeve. But I always detest such unworthy practices, and I shall continue to despise them, as long as I live; I know well, that we are religiously bound to assist one another, as far as lays in our power.

NEITHER the heathens, or barbarians are so destitute of humanity as to forget the obligation of doing good, to which by the law of nature we are bound. How much ashamed would the sordid venders of these ARCANUM be, if they were exposed to the public view of the old Assyrians or Babylonians, among whom there was a law, that no person should pass by the sick without communicating what remedies he was acquainted with for their relief, and that without either fee or reward.

THE constitution of Vienna is in this respect well regulated, and this we owe to the wise

*1 Petri c. iv. v. viii. Ante omnia autem in vobismet
charitatem habentes, quia charitas operit multitudinem
peccatorum; et ver. 10. Unusquisque, sicut accepit grati-
tiam in alterutram illam administrantes, sicut boni dispen-
satores multiformis gratia Dei.*

councils of the noble L. B. VAN SWIETEN, who employs his whole attention, and bestows great labour in enlarging the limits of medicine, especially of what relates to the practice: his attention wholly consists in this, that the most efficacious and certain remedies may be daily found out for the benefit and advantage of the unhappy sick, and likewise in totally banishing quacks, mountebanks, and the avaritious vendors of arcana; while, in the mean time at Paris, London, and in other large cities, that race of men are with impunity tolerated; to the common prejudice of mankind, and the reproach of physic:

ONE wise resolution of this eminent man, is, that if any remedy be sufficiently recommended for its great utility, it is immediately published for the general good, for certainly the private advantage of one or two persons is not to be preferred to the common good of our fellow-citizens.

THAT this is the fixed and stated opinion of this great man will appear evidently from what he has written formerly on the subject of the cancer,* and lately on other subjects†.

THE

* Sect. 509. Comment. T. 1. p. 901. Forte tamen et in aliqua spes esset, non penitus impossibilem esse canceri separationem a partibus sanis: licet hactenus ignoretur, qua methodo, quibusve remediis, hoc fieri possit. Quam felix ille qui hoc inveniret, quam premia dignus, quid ventum celaret, turpis lucri causa.

† T. IV. § 1371. p. 729. Sed quisque novit, arcanorum

THE conduct of the celebrated Dr. Sydenham ought to be impressed on our minds, as an example and incitement to all, who being fortunate in his discoveries, has early applied them for the benefit of society, putting little value upon them, if they were not made publickly useful.

WHILE I revolved all these considerations in my own mind, while I had so many glorious examples before me, while besides I thought that it was the business of an honest and ingenuous man, if possible, to bestow his labours on what is of general utility, I found myself under the necessity to communicate to the public this new and easy method of giving Mercury to venereal patients in the manner I learned from experience.

NOR do I this from any prospect of gain, the farther success of this method, and the great relief it may give to my neighbours, will afford me sufficient reward.

NOR do I fear the censures of the envious, since many eminent authors have met with such treatment for their good offices to mankind,

venditoribus non semper habendam esse fidem. Ingequum decet, ut generis humani utilitatem lucro magis æstimet. Sed auri sacra fames sæpe aliud suadet; nunquam me penituit, candide communicasse omnibus si quid in arte utile novissem, nec penitebit, certus sum illo tempore,

— — — — — dum numina nobis

“ Mors instans majora facit,

though

though they resolutely withstood the flanders of
envy,

Quæ videt ingratos, intabescitque videndo

Successus hominum, carpitque et carpitur una

Suppliciumque suum est.

OVID. Metamorph. Lib. II.

A N E W

NEW and EASY METHOD
of
Giving MERCURY to those labouring
under the Venereal Disease.

CHAP. I.

The Origin of this Method:

SOME months ago when I had occasion to write a book, in which I undertook to defend the efficacy of the Corrosive Sublimate in the cure of the Venereal Disease, that I might enquire into the cause by which Mercury more especially acted on the salivary glands, I conversed upon the subject with **PHILIPPUS AMEROSIUS MAREHERR**, a very eminent physician, and my particular friend, who with his usual candour, told me, that as yet no just account of that phenomenon was given;—that many hypotheses had been thought of by a variety of authors, but that none of them was sufficiently accurate;—that the very plausible opinion

of Dr. PITCAIRN, who seemed to many to have hit upon the thing, in attributing it to the specific gravity of the Mercury, was so fully refuted by *) § VAN SWIETEN, that nothing more remained to be offered for its defence; in the mean-time it seemed probable to him, that Mercury had a greater affinity with the saliva and mucus, than with any of the other fluids of our body, and that therefore the mouth and throat were chiefly affected by it. — This discerning man likewise added, that he had seen a small quantity of Mercury by trituration disappear in the saliva, but that it was still probable, there was a greater affinity between Mercury and mucus; for Mercury not only runs to the salivary glands, but likewise to the mucous ones, and besides, that the more viscid mucus was much fitter for retaining it than the thinner fluid the saliva; and observed, that an experiment might be made to determine this matter with certainty, which has hitherto been neglected on account of its simplicity: a very frequent cause, why many things remain concealed which might otherwise be easily known.

This opinion of my very judicious friend so pleased me, that I determined immediately to put it to the test of chemical experiments.

*) § 135. C. T. I. P. 207

Therefore

Therefore the day after, I made an experiment, and observed that a small quantity of Mercury was made to disappear in the saliva; that however, the mucus received a larger quantity; and that it united with it more expeditiously. And thereby I found that the opinion of my learned friend concerning the affinity of Mercury with these fluids was entirely confirmed by experiment, and immediately made him acquainted with the event, this being done, we unanimously agreed, that Mercury should be tried in the same manner with other mucilaginous bodies, both animal and vegetable, that it might appear whether there are not other gelatinous and viscid substances with which Mercury can be likewise united, and if there are any such, whether they differ in their powers more or less from that of saliva and animal mucus—For this purpose the following experiments were made:

EXPERIMENT I.

Mercury with animal mucus.

I mixed one part of very pure Mercury with two parts of mucus discharged from the throat, by expectoration; I triturated them together in a marble mortar, and exactly marked the time which was necessary for the complete extinction of it; and I perceived that in

the space of seven minutes the whole of the Mercury was converted into a greyish viscid substance, after the addition of water very little remained suspended, but it soon precipitated to the bottom; the Mercury, however, did not separate, but still remained entangled and united with the mucus at the bottom of the vessel. There was one scruple of Mercury and two of mucus. The saliva extinguished a much less proportion of Mercury, and its extinguishing any depended perhaps on its having a quantity of mucus united with it, it being impossible to obtain saliva perfectly free from it.

EXPERIMENT II.

Mercury with the yolk of an egg.

I triturated the whole of the yolk of an egg with one drachm of Mercury in a marble mortar for an hour: At first sight the Mercury seemed entirely to disappear, but upon adding a little water, it recovered its form, and the viscosity of the yolk being diluted, it fell down to the bottom in its metallic running state, and by degrees went into large globules entirely separate from other matter.

EXPERIMENT III.

Mercury with the white of an egg.

The white of an Egg shews still less power on Mercury: for one dram of Mercury being tritu-

trituated with the white of an Egg for almost half an hour, was by no means extinguished by it, and upon pouring water to it, the Mercury run into large globules, and subsided to the bottom,

EXPERIMENT IV.

Mercury with the blood and its serum.

I mixed a quantity of quicksilver with the serum of blood, which, to obviate mistake, I took from myself, and I trituated them together, as in the former experiment. The extinction was very inconsiderable, and the union much less firm than that with mucus, for upon pouring water, the quick-silver immediately subsided in the form of small globules.

I tryed the same Experiment with the red part of the blood, and almost the same phenomenon occurred, only that the serum seemed to have more effect than the red part upon the Mercury.

EXPERIMENT V.

Mercury with fresh animal bile.

I trituated one drachm of Mercury with two drachms of the recent bile of the pike fish, for half an hour: it was with great difficulty that the smallest portion of it could be extinguished,

guished, and upon the affusion of water, the Mercury soon subsided to the bottom, and run into larger globules.

EXPERIMENT VI.

Mercury with isinglass.

To two drachms of isinglass reduced to the consistence of glue, I added one drachm of Mercury, and triturated them together with great labour for more than half an hour: but all was in vain; the smallest quantity of Mercury did not unite with it—It is well known that quicksilver can be very readily extinguished by animal fat; but so perfect a division, and so thorough an extinction cannot be thereby obtained as with mucus; for the fat being rendered more liquid by heat, nay even spontaneously, the Mercury in Neapolitan ointment will subside to the bottom.

COROLLARY.

From these experiments it evidently appears that Mercury has a much greater affinity with mucus, than with other animal fluids; and hence it seems probable that if other animal fluids unite with it, it is owing to the quantity of mucus which they contain.

EXPERIMENT VII.

Mercury with the mucilage of gum arabic.

When therefore, from the former experiments, I learned that there are no animal fluids but mucus that is proper for extinguishing Mercury, curiosity excited me to try whether vegetable mucus or gummy substances might not do the same; therefore I triturated one drachm of quicksilver, with two drachms of gum arabic for a quarter of an hour in a stone mortar, adding by degrees a small portion of water, so as to give it the consistence of a mucilage. To my great surprize the Mercury suddenly disappeared, and the whole being carefully rubbed together, became a viscid grey mucus, which being diluted and agitated with a pound of water, the whole became of a grey colour, and one part remained suspended in it, while another part, upon allowing the vessel to stand at rest for some minutes, was slowly deposited to the bottom in the form of a grey sediment, in which the Mercury was so thoroughly extinguished by the viscid mucus, that, although a large quantity of water was added, they remained united together, and the Mercury did not run into globules as usual. By a gentle agitation of the vessel, the whole of this mucus was again readily united with the
 water,

water, and on the surface of the water, somewhat elevated, there was a white froth, which, together with the water, held the Mercury suspended in a very subtile attenuated state; for, upon immersing a gold ring in it, it was perfectly whiten'd and silveriz'd.

I repeated the same experiment with a smaller quantity. A scruple of gum arabic was reduced to mucilage, and mixed with ten grains of Mercury, that it might be an experiment similar to the first. — In the space of six minutes the Mercury was entirely extinguished, while seven minutes were necessary in uniting it with animal mucilage; therefore Mercury admits of a much more ready union with gum arabic.

The gummy mercurial sediment remained for a long time, even for many weeks, without undergoing any change, unless that in a length of time it became somewhat grumous, more black, and was less equally miscible with the fluid on its surface; it however did not deposit the whole of the Mercury, until the liquor above being previously separated by a filtration, was exsiccated by the heat of a furnace; then indeed the power of the mucilage was destroyed, and the Mercury separated and was now to be observed in the form of the globules of quicksilver.

EXPERIMENT VIII.

Mercury, by the assistance of gum arabic, intimately united with animal fluids.

From the former experiments (2, 3, 4, 5, 6) it appears that the blood and its serum, the yolk and the white of an egg, the bile, and in glass, are insufficient for extinguishing any considerable quantity of Mercury; but if any quantity of the mucilage of gum arabic be mixed with these, the Mercury is immediately equably united with them, just in the same manner as when animal mucus itself is added: hence quicksilver, by means of this substance, is even rendered miscible with others, with which it has either no affinity, or a very small one.

EXPERIMENT IX.

Mercury with gum tragacanth.

The power of gum tragacanth is by no means the same: For this, reduced to a mucilage, upon the addition of water, in no manner answered my expectation, for although I used every endeavour, and continued a trituration for half an hour, the smallest quantity of Mercury could not be extinguished, and upon pouring water, and thereby diluting the mucilage, it retained the form of quicksilver, with its metallic splendor, and fell down to the bottom of the vessel.

EXPERIMENT X.

Mercury with the mucilage of the seed of quinces.

The same effect nearly followed from the mucilage extracted from the seed of the quince, three drachms of which being triturated for half an hour with one drachm of Mercury, there was no mark of any combination.

EXPERIMENT XI.

Mercury with the farina of the root of marshmallows, and starch.

With a very fine farina of marshmallows I mixed a small quantity of water, that it might form a kind of glue : a small quantity of Mercury was added, and triturated for a considerable time, but from this no extinction of the Mercury was observable. When Mercury, however, was triturated with a quantity of starch, it was somewhat extinguished ; Starch containing an animal gluten in it.*

EXPERIMENT XII.

Mercury with manna of Calabria:

I try'd pure manna in the same manner, because it seems to contain a quantity of mucilage

* Cf. Professor Crantz, Mat. Med. T. 1. p. 9. & illustr. L. B. Van Sweten, C. T. iv. p. 107.

lage, and it is a common opinion that it enters into the composition of Keiser's pills. I carefully triturated two parts of it with one of Mercury for a quarter of an hour, but I could scarcely extinguish any; however, upon repeating this experiment with common manna, I saw a large quantity of Mercury sufficiently extinguished by it.

EXPERIMENT XIII.

Mercury with crude and clarify'd honey.

To two drachms of crude, white, thick honey I added one drachm of quicksilver, and triturated them both together for a quarter of an hour. The Mercury was pretty well extinguished, and, contrary to my expectations, after adding water to it, remained extinguished, and deposited a grey sediment at the bottom of the vessel, but less easily miscible with water than that which arose from the union of gum arabic and Mercury. I repeated the same experiment with clarify'd honey, but none of the Mercury was extinguished; for upon the effusion of water the whole appeared at the bottom in large splendid globules.

Crude honey contains some mucilage in it; hence it is that it is so fit for extinguishing Mercury: But that mucilage is lost by boiling and clarifying; for which reason it has no such power on Mercury.

EXPERIMENT XIV.

Mercury with simple syrup.

Very pure white sugar being formed into a simple syrup, with half its quantity of water, and tho' long triturated with Mercury, did not extinguish a particle of it.

But this effect happened contrary to expectation, that altho' neither sugar nor syrup shewed any efficacy in extinguishing Mercury, yet they even increased the power of gum arabic in this respect; so that, by the assistance of sugar or syrup, this mucilage united more firmly and tenaciously with Mercury.

It is to be observed, that when sugar was triturated with Mercury it became black.

The same experiment was try'd with a variety of syrups, such as of diacodion, of kermes, and of violets; and I always observed that a more thorough extinction of the Mercury with the mucus was thereby produced.

In this manner, by different syrups, a variety of colours, taste, and smell, may be communicated to Mercury, so as to conceal it from the knowledge of suspicious persons.

EXPERIMENT XV.

Mercury with linseed oil and fat.

I extinguished Mercury in the pure oil of linseed, with little labour, but a small quantity could

could only be thus united with the glutinous sediment of the linseed oil. Water occasioned a sediment of the consistence of butter, and when this was separated the Mercury could not be extinguished in it. Perhaps by a boiling heat Mercury might be made to form a more intimate union with oil, which experiment, however, I have not try'd.

But Mercury extinguished by gum arabic will admit of a very ready union with either oil or fat; nor will it separate and fall so soon to the bottom, as it does in the common Neapolitan ointment.—See Experiment VI.

C O R O L L A R Y S.

From these Experiments (7, 8, 9, 10, 11, 12, 13, 14, 15) it evidently appears

1st. That of all vegetable, gummy or plastic substances, gum arabic is the only one which in its nature approaches the nearest to animal mucus: hence it is to be preferred in extinguishing of Mercury.

2^{dly}. That the extinction of the Mercury by means of animal mucus and gum arabic, does not depend upon mechanical principles, nor can it be referred only to the viscosity of the mucilage, for many other substances, more viscid and tenacious, when longer triturated with it, by no means answer the same purpose, and water, which is the best and purest instrument

for

for gummy substances, can neither separate animal mucus, nor mucilage of gum arabic from Mercury, providing they had been intimately united together; the contrary of which takes place in the mucilage of gum tragacanth, in that of quinces, and others.

3dly. And then, altho' mechanical triture greatly assists the extinction of Mercury, a true affinity exists between Mercury, animal mucus, and gum arabic, and this is the reason why, when once united, they remained so firmly attached to one another: nor does the mucilage rather attract the water, but immediately joins it to the Mercury, so that they all remain intimately united.

When I had sufficiently proved every thing by experiment, and when I was convinced thereby of the affinity which Mercury has with the saliva and animal mucus, which my ingenious friend first suggested to me, I did not doubt but that his opinion with regard to the action of Mercury in the throat and salivary glands was well founded, and it carried more probability along with it, than that of all the rest.

But since gum arabic in every respect excels the animal mucus in extinguishing Mercury, it seemed to me that this was the fittest and most natural vehicle of Mercury, by which as a medium it could be united with all
the

the fluids of our body. However being little solicitous about forming a new hypothesis, I believed that my labour might be more usefully employed, if I tried the effects of such a preparation in those who had the venereal disease, that we might be assured whether it could pass the *PRIMÆ VIÆ* in such a form, for if it could pass into the blood in this manner, we did not doubt but that it might cure the venereal disease more effectually than any of the other preparations; and that from its being perfectly mild, and destitute of such acrimony as might hurt the body, while the other preparations cannot be given in large doses from the great quantity of saline acrimony that adheres to them, and when prescribed in small doses, they act only after a considerable length of time, and cure the disease very slowly.

I was from this time determined by the approbation and advice of a very ingenious man to take the first opportunity of trying Mercury thus prepared, when any person should offer who laboured under the venereal disease.

Three days after, a woman with the venereal disease came to me, whose history is mentioned in the first observation: afterwards others came labouring under the same disease, whose cases are given in the following observations.

When I perceived in all these cases the remarkable and sudden efficacy of this gummy
 ybed
 prepa-

preparation of Mercury; and constantly observed that its usefulness exceeded my most sanguine expectations, so that in a short time it did more than could be expected from all the other preparations; and farther found that no salivation could be excited by this preparation, altho' given in very large quantity, unless there was another mercurial in the body, or during the cure, another besides the gummy mercurial was taken, I was fully convinced that this was the best method of giving Mercury, and that no other could be compared with it.

Having thus discovered my method of preparing Mercury, I shall now submit to the public for very important reasons, already offered in the preface, my own observations and those communicated to me by others.

C H A P. II.

Practical observations regarding the efficacy of this gummy Mercurial in the Venereal Disease.

A Woman aged twenty-eight of a sanguineous temperament, who had for some months Venereal blotches in her forehead and face, and a very ugly scab over her whole body,

body, labouring under the fluor albus, watchings, in the night-time, and pains of the joints, came to me, to sell poultry, and being much ashamed she covered her face over with a cloth.

No body would buy her poultry from her, on account of her being of a nasty appearance; I immediately knew the disease, and after examining her, I promised that as she was poor, I would give her Medicines for nothing, if she would return to me every three days and let me know how she did.

The day after, she took a mercurial purgative, and the following day she began to take one spoonful of the simple solution (No. 1.) morning and evening, with a decoction of sarsaparilla and hemlock, she likewise used the warm bath.

Returning three days afterwards, her pain was somewhat abated; I ordered her to continue the bath, and to take two spoonfuls of the solution morning and evening.

She returned three days after, and was entirely free from her pains, some of the spots had disappeared, she rested better in the night time, her fluor albus was the same as before.

On the thirteenth day all the spots disappeared, there were no nocturnal pains. I gave her a fresh quantity of the mercurial solution to

which

which I added the balsam of capivi, as is prescribed in (No. 2.)

The woman returned in eight days after, free of all her symptoms, except the fluor albus, which was by no means abated, because she still admitted the embraces of her husband as she herself confessed; I ordered that her husband might be brought, and I promised to cure him for nothing.

But being free from her former complaints, she became negligent, she would not hearken to my advice, and has never since returned.

Yet I will, on this account, not allow that this observation is in the least imperfect, for it sufficiently proves the efficacy of our remedy in removing her former complaints.

This woman swallowed more than three drachms of the gummy mercurial, nor was there the least sign of a salivation.

OBSERVATION II.

A soldier, aged thirty, of a sanguineous habit, having some months ago a gonorrhoea stopt, he contracted a pox, and besides venereal blotches in his forehead, and in both sides of the frontal bone, he had a broad tophus, not however much elevated, he was likewise troubled with pains of the joints; his throat, and the glans penis were much ulcerated.

Having

Having given him a purgative, he began to take daily two spoonfuls of the solution No. 1. with a decoction of the sarsaparilla without milk.

All his complaints were entirely removed in six days, without any salivation, unless, that when he was exposed to cold, there appeared very broad reddish spots on his forehead and face, very different however from the former, and which again disappeared of their own accord by the heat of a stove. I still persuaded him to repeat his medicine, which he did, and was entirely cured in eight days. Although this patient had always formerly a gentle salivation excited even by a mild purgative, yet after taking three drachms of this gummy mercurial, which effected the cure, no sign of salivation could be perceived.

OBSERVATION III.

A Soldier, aged 36, of a sanguineous temperament, had a violent rheumatism in his right arm, from a venereal cause. In the middle of the os humeri there was an incipient tophus. There was besides a foul ulcer in the upper part of the first metacarpal bone which corresponds with the thumb. These complaints had continued more than six months.

But

But a gonorrhoea being some days before stopt, there came on a swelling and pain of the testicle, which brought on a strangury in making urine.

He was blooded on the first day, and the same day he took a cooling purge; an emollient fomentation was applyed to his scrotum. The day following he swallowed emulsions of almonds, gum arabic, syrup of diacodion, and likewise many cups-full of decoction of sarsaparilla, with mullein and marshmallows. —He went on in this way for three days; the pain of his testicles ceased. The gonorrhoea did not even return; he made urine more easily; the left testicle remained swelled; the right was much diminished in size. A balsamic essence in which there was two grains of corrosive sublimate dissolved was apply'd to the foul ulcer

My mercurial ointment (No. 6) was apply'd to the tophus. There was given internally two spoons-full of the solution (No. 1) with the decoction of sarsaparilla and the emollients. —There was also apply'd to the swelled testicles my mercurial ointment, with the ung. de Lithargyr.

All these things were continued for eleven days, the tophus disappeared, the swelling of the testicles was resolved, and the rheumatism was cured, the callous edges of the ulcer disappeared,

appeared, and it became perfectly clean on its surface. I then apply'd the balsamic mercurial ointment to it, and in 14 days he left Vienna perfectly cured.

During the whole time that he took six drachms of this gummy mercurial, he had not the least sign of salivation.

OBSERVATION IV.

A man, aged 28, of an emaciated habit, who had been for more than a year troubled with a dry scabby eruption, was at last seized with a gonorrhœa, which he has now had seven months.

On the first day he was purged, on the second day he began the balsamic mercurial solution (No. 2) with the decoction of sarsaparilla, burdock, and polypody.

In eight days neither the gonorrhœa or scabby eruption was changed, the urine only flowed more copiously.

In other eight days the running of the gonorrhœa was in less quantity and whiter, but the eruption continued as before. I was therefore persuaded to wash his extremities with a vegeto-mineral water, composed of one pound of fountain water and one drachm of the acetum lithargyrii.

Nor

Nor was the scabby eruption changed for eight days after, altho' the gonorrhoea was much diminished.

Therefore I employ'd for the eruption the following ointment: R. Pulv. Hellebor, Alb. Sal. Ammon. Crud. a ʒj. Axung. Porcin. ʒij. Ol. Rosac. gutt. x. m. f. Ung. to be apply'd to the extremities twice a day; sometimes to one scabby part, sometimes to another. And thus, in the space of eight days, by continuing the balsamic solution of Mercury, the gonorrhoea was cured, and in a short time the scabby eruption entirely disappeared.

This eruption, however, was not venereal, but received in some other manner.

The good effects of the white hellebore in the itch, which I have frequently experienced, I owe to the most eminent and skilful Dr. Pringle.*

OBSERVATION V.

A widow, aged 47, of a thin habit of body, was afflicted, for more than two years, with a very malignant fluor albus, afterwards with the gout, head-ach in the night-time, ulcers of the throat, venereal protuberant blotches on

* Observat. on the diseases of the army, on the itch, p. 311.

her forehead and face, condylomata about the anus, the bones of the nose carious, an incipient tophus of the left elbow, an ugly scrophulous sore in her neck, and with all these complaints, she asked my advice.

Having given her a purge, the day after she began to take morning and evening two spoonfuls of the balsamic mercurial solution, and to drink the decoction of sarsaparilla and hemlock with milk.

She washed her throat and nose frequently in the day time with the gargarism (No. 4.) ; she touched the venereal blotches of her forehead and face every day with the caustic solution (No. 3.) diluted with a good deal of rose water.

The venereal blotches in three days time, were covered over with a crust, and perfectly dry.

In eight days the pains abated, the blotches entirely disappeared, so that the smallest vestige of them did not remain.

The other symptoms remained the same.

She continued for some days to take the mercurial solution, but being seized with an intermittent fever, I omitted the solution : a purgative, and afterwards the Peruvian bark was prescribed for her, by a very eminent physician who first committed her to my care.

The fever ceased in four days, the venereal symptoms continued as before, except that the ulcers in her throat were better.

She began again to take the solution; her throat became much better, her nostrils however were more swelled, I then ordered her to draw up into her nose, the decoction of the hemlock mixed with the mercurial balsamic gargarism, and a poultice of bread and milk was externally applied to her nose.

In four days the swelling of her nose disappeared, and there dropt from her nostrils a large quantity of a sanious purulent matter.

Eight days were scarcely elapsed, when she was seized with a very irregular intermittent fever.

She then abstained from every mercurial, and after being purged, she repeated the use of the bark; the fever disappeared in fourteen days.*

* The very eminent PARIT, the father, is of opinion that a quartan fever is sometimes a symptom of the venereal disease, and therefore he cures quartan fevers by salivation, in those persons who many years before have had venereal symptoms, and even some after they have resisted febrifuge medicines. *Memoir. de l'Acad. Royale de Chirurgie*, tom. I. p. 347. &c.

But V. SWIETEN has given us an observation which leads to a contrary opinion; during the course of a salivation, he observed a quartan fever of a regular type. *Comment.* tom. I. p. 10. I can positively affirm that I have seen an intermittent fever brought on by unction in venereal patients, which could be cured by no other remedy but the bark, and as often as the Mercury was repeated, so often did the fever return.

but

but the venereal symptoms which yet remained became much worse. Being at last free from the intermittent fever, she used, for three weeks, the solution and other remedies, so that the pains, head-ach, tophus, and scrophula, entirely disappeared.

The fluor albus remained, but less violent and whiter, the cariousness about the nose and the condylomata about the anus were not gone.

The condylomata were touched with the caustic solution; they became immediately smaller; a crust was formed. The other means are continued, and I hope I am about to effect the cure.

OBSERVATION VI.

A man aged 45, of a thin habit, has been for 9 years so afflicted with repeated gonorrhœas, that he has been scarce eight days without this troublesome running; the fluid discharged at the time he began my medicine was thin and yellow, he has an itching in the middle of his urethra, and while he makes urine he feels a very troublesome tension, and has a very painful chordée; I advised him not to trust to a cure which was promised to him by a quack, by using a secret medicine by injection.

E For the composition of the most useful and excellent
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The next day he took a purge, and the day after I suspected that there was an abscess in his urethra, I therefore introduced a bougée covered over with the balsam of arcæus.

On the third day, when I try'd to introduce a new bougée, there was suddenly felt a pain in the middle of the urethra, and there was a greater quantity of yellow pus, mixed with some drops of blood suddenly discharged, which might have filled a tea-spoon.

He took for eight days morning and evening two spoonfulls of my balsamic mercurial solution; for his ordinary drink, he drank twice a day a decoction of sarsaparilla and hemlock with milk; for half an hour he introduced a bougée covered over with the balsamic mercurial ointment.

During almost eight days, the running of the gonorrhœa was very copious.

In other eight days the flow was less, and the colour was whiter.

He continued for some time in this method, and at last dry * bougées were introduced; the running by degrees ceas'd altogether, so that, on the thirtieth day from the beginning of the cure, he went away from Vienna per-

* For the composition of the bougées, you may consult the chirurgical works of the most skilful and excellent GOULARD, written in French, Tom. II. which book cannot be sufficiently admired.

fectly well, and promised to write to me if he had any relapse of his ailment. During the whole cure there was no symptom of salivation.

OBSERVATION VII.

A man aged 36, of a sanguineous habit, for more than 5 years had been affected repeatedly with gonorrhœas; he had sometimes also ulcerations both on his prepuce and glans, and one large condyloma on the glans.

After giving a purgative, on the following day he took the mercurial balsamic solution. The ulcers were dressed with the mercurial ointment. The condyloma was twice every day touched with the caustic solution.

On the first days the ulcers became larger, and more suppurating: on the eighth day they were perfectly cured: on the thirteenth day the condyloma was perfectly dry.

The running of the gonorrhœa was less in quantity, and I introduced a bougée covered over with mercurial ointment.

He was thus entirely cured in four weeks, nor was there, during the cure, the least sign of a salivation.

OBSERVATION VIII.

A man aged 28, of a thin habit of body, contracted pains in the joints by a gonorrhæa that had been stopt three years ago, at last the glands of his neck became scrophulous, and he had seven broad deep ulcers in his throat, when he committed himself to my care.

On the first day he was purged, on the next day I ordered him to take two spoonfuls of the simple solution morning and evening, and for his ordinary drink he had a decoction of sarsaparilla, hemlock, and the pectoral species with milk.

On the fourth day a gentle salivation began; however, the fluid, discharged, was more glutinous than the salivary, but during it, the ulcers of the throat became very foul, on which account they were touched twice a day with a feather dipt in honey of roses, which was mixed with a small quantity of Egyptiac ointment; he frequently washes his mouth, and injects into his throat a balsamic gargarism prepared without the gummy mercurial: he was ordered to take one spoonful of the mercurial solution morning and evening.

The salivation thus continued untill the seventh day, but was very gentle, attended with neither inflammation of the gums or loosening
of

of the teeth; three, and sometimes four ounces were discharged in a day, the ulcers became daily cleaner and smaller. What seemed to me surprizing, was that at last the salivation ceased even under the continuance of the solution; and although again, morning and evening, two spoonfuls of the solution were taken, yet during the rest of the cure there was no farther sign of salivation.

By the sixteenth day all the seven ulcers of the throat were perfectly cured, the pains were entirely gone, and he rested well in the night time. But, contrary to my inclination, one of the scrophulous glands was by a quack eroded and ulcerated by means of a blister. I then ordered that the open sore, which was as yet very hard about the edges, might be dressed with balsamic ointment mixed with the gummy mercurial. The other glands were rubbed with my mercurial cerate, and afterwards covered over with a plaister.

Then in eight days all the scrophulous glands disappeared, and the open ulcer was healed.

It may be asked whether the salivation was in this case produced by my mercurial preparation, or by the former Mercury which might be still in the body? In the seven first observations there was no sign of a salivation; and besides, this salivation only lasted for seven days, nor did it continue although the dose of
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the gummy mercurial was encreased, which was repeated even for three weeks.

Besides this man had been taking a variety of mercurial preparations for many years, and not long before my cure he had been using it by friction, so as even to have a salivation excited, and that without effecting a cure.

From the following observations I learn that a salivation may be excited in those persons, who immediately before the use of my mercurial, or during its use, have taken other mercurials internally, or applied them externally. I have seen this happen from the emplastrum Vigonis, Neopolitan ointment, calomel, and a solution of corrosive sublimate in spirit. The gummy mercurial seems to accommodate itself so well to the salivary glands, that any other mercurial, taken either before or during the use of this mercurial, more readily brings about a salivation.

OBSERVATION IX.

A girl 3 years of age, of a sanguineous temperament, had for more than half a year, the labia vulvæ, the perinæum, and the whole circumference of the anus covered over with small condylomata; she had likewise a very foetid fluor albus.

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The first passages being cleans'd, she began to take the balsamic mercurial solution, and the condylomatous crusts were touched twice a day with the caustic solution, so that in three weeks they disappeared, and on the fourth week the fluor albus was cured.

She had, however, a very troublesome itching of the vagina after the condylomata were cured, while the fluor-albus continued. In three days the itching went off, by anointing the vagina with the mucous mercurial ointment, and three times bathing in the water of the Danube.

OBSERVATION X.

Aman, aged 35, twelve years ago, having a venereal bubo which went off by resolution, was seized with violent pains in his joints, which were treated by a variety of mercurial preparations: they were lessened by these means, but never entirely cured; and now he has for six years lived perpetually affected with these pains, and last year a venereal gummi arose from the seventh true rib of his left side, which, by degrees, ulcerating, gave out a large quantity of sanious pus: it was treated with exsiccants, and partly for the cure of the pains, and partly for that of the gummi sore,

Ba-

Baden * bath was ordered for the patient; he began the use of this bath, but while he was in it the third time, he was seized with a palsy in one side; therefore he returned to Vienna.

The pains were so violent, that, altho' he had lost the motion of one side, he loudly complained of them.

The patient was found in this situation by a very eminent surgeon, who shewed him to me, and then, by the advice of a very skilful physician, my gummy mercurial was prescribed for him, with the decoction of sarsaparilla and milk; the ulcerated tumor was dressed with the balsamic mercurial ointment.

On the third day the patient could move his fingers more easily, and with less pain; the ulcerated tumor on the rib began to discharge more pus.

On the 14th day the gummi was resolved and cured: the venereal pains and palsy disappeared in four weeks. A sciatic pain, however, still continued, for the cure of which a very eminent physician prescribed pills prepared from the gummy mercurial, hemlock and camphor, and in three days after the pain entirely left him.

OBSERVATION XI.

A girl, aged 23, had for six months, venereal scabs, and condylomatous crista on the back part of the neck, the cheeks, and hands; had likewise a fluor albus, violent rheumatic and arthritic pains, especially in the night time: a large tophus also occupied the right tibia. In fourteen days the scabs and condylomata were much mended, by the use alone of the gummy mercurial and the sassaaparilla, and at the same time all the pains left her. There were no signs of salivation. The emplastrum Vigonis was from this time apply'd to the tophus, whose height was somewhat less than half an inch. In six days after, the girl perceived a salivation, and felt a difficulty in swallowing. A purge was ordered her, and her throat was wash'd with the vegeto-mineral water, so that in three days, the plaister and gummy mercurial being omitted, this gentle salivation entirely ceased.

Some time after, she began again to take the solution, and without perceiving any salivation, she was perfectly cured. This, however, is surprizing, that during the use of this remedy a new tophus appeared in the left tibia, and which, after some days, entirely went off.

OBSERVATION 2 XII.

A child of a year and a half old, whose parents were not venereal, had, for half a year, condylomata about the anus, rhagades, and small ulcers in the angles of the mouth.

The parents believed that there was a venereal infection communicated to the child, by cloths which had been used by others who had this disease.

An eminent physician, after giving a gentle purgative, prescribed half a drachm of the gummy mercurial, minutely divided in two ounces of the syrup of violets, diluted with one ounce of the water of fumatory.

A teaspoonful of this syrup morning and evening, was given to the child, with the decoction of sarsaparilla. The condylomata were touched twice with the caustic solution, diluted in rose water, and immediately after, the ointment was apply'd to them. The ulcerated angles of the mouth were twice a day dressed with the mercurial balsamic ointment.

By this means the child slept well on the fourth night, who, for some months before, had very restless nights; the angles of the mouth were for two days rather more ulcerated then they became cleaner, and on the tenth day were perfectly cured.

The

The condylomata were perfectly dry on the twenty-third day; the child became well, and there was no sign of a salivation.

I might to these have added many other observations, by which the successful and expeditious effects arising from the use of this mercurial were farther proved, but I choose to pass them over, as of less moment, nor were the diseases so violent as those already mentioned, and more especially, as I shall give such other practical remarks as on a future occasion may prove worthy of notice.

In fact, I expect every day to experience the good effects of it, and more especially as I now understand that this preparation is frequently prescrib'd for the sick by the most eminent physicians of this city; and what more directly confirms me in this opinion, is a friendly letter I have received from Mederer, surgeon to a regiment of Danish curassiers,* who attests the great success of this remedy in a variety of cases.

In almost all those that used this remedy, I observed a greater secretion of urine, which

* I have try'd quicksilver twice mix'd with water, agreeable to the art found out by you; and the surgeon general, Mr. Zierzon, at Arad, has try'd it above thirty times. The good success arising from it has occasioned its use at the hospital of Temesvar, of which I will afterwards give you a particular account, &c.—[translated from the German.]

Siclo, near Arad, 1st of August.

MEDERER.

flowed

flowed not only in larger quantity, but was
maucous and foetid.

In some, however, in the space of a few days,
there was relief from a spontaneous discharge by
sweating, in none, however, did a diarrhæa or sa-
livation come on, unless when other mercurial
preparations had intervened. The belly of all of
them was regular, and even in those who were
otherways costive.

In some a fluor albus, in others a gonorrhæa
was brought on again for a few days.

I have perceived nothing peculiar occur in
indurated old buboes. I have seen tumors of
this kind rendered softer by the external appli-
cation of the mercurial ointment, and the in-
ternal use of my gummy mercurial, but have
as yet never been able to effect a perfect reso-
lution; nor will that seem surprizing since it is
obvious to every one, how obstinate these in-
durations are, and how long they resist medi-
cines of the greatest efficacy.

CHAP.

C H A P. III.

Conclusions relating to the venereal Disease, drawn partly from the observations already made, and partly from those of others.

WHETHER is not my method to be preferred upon an accurate comparison of it with others in use?

At present there are three different methods of giving Mercury.

Some apply Mercury externally in the form of unction, so as to bring on a salivation, and by thus salivating their patients for some weeks, attempt to cure the disease.

Others apply it externally in a very small quantity, and by the interposition of purgatives, prevent a salivation.

Others, again, use a variety of mercurial preparations which are taken internally.

From pathology we learn that five **POSTULATA** are required before the venereal virus can be perfectly destroyed by Mercury.

1. That so much Mercury be taken into the body, as is necessary for overcoming and destroying the venereal virus that exists in it.

2. That

2. That the Mercury flows freely through all the small vessels of our system.

3. That it impregnates every particle of our fluids.

4. That it remains united with our fluids for some length of time, and frequently circulates with them.

5. That at last the virus along with the Mercury be conveniently evacuated by natural excretions.

I shall now in a few words enquire, whether the first, second, and third methods are sufficient for these purposes? or whether my method be preferable to them?

In a mercurial salivation the Mercury is very thoroughly and copiously blended with our fluids, but that it is generally discharged out of the body on the first days, appears from this that a piece of gold held in the mouth then becomes white; though afterwards, unless a fresh quantity of Mercury is taken in, the saliva has no such effect; a sure proof that all the Mercury is evacuated from the system*. This seems to me to be the reason, why many by repeated salivation have not been cured of the venereal disease, especially those who had a salivation soon excited in them after the second or third anointing, by which the Mercury was too soon evacuated out of the body.

* Illustr. Von Rosenstein Abhandlung von denen Kinderkrankheiten, C. de Lue Venerea.

Besides, a salivation is very INCONVENIENT, is DANGEROUS, does not give a CERTAIN CURE, is NOT CRITICAL, nor can it be excited in EVERY SUBJECT, nor is it necessary in any.

All this may be demonstrated in the following Manner :

The INCONVENIENCIES arising from it appear of themselves, when we consider the tediousness of the application of the unction, the inflammation of the throat that frequently attends it, the fever that is always present, a necessary abstinence from almost all kinds of food, an uninterrupted discharge of saliva for six or more weeks, a continual fear of suffocation upon the least exposure to cold, troublesome exulcerations of the throat, a stinking breath, and finally the body emaciated after the cure. I shall say nothing of the consequences arising from a constant confinement, at home, from the putrid atmosphere that constantly surrounds him in his chamber, and besides of his being deprived of the company of his friends. Nor need I add more since * VAN SWIETEN, has with so much clearness pointed out the inconveniences arising from a salivation.

But a salivation is likewise a DANGEROUS practice, for the famous ASTRUC † attests

* Comment. T. 1. § 135. p. 206. 207.

† In his book on the venereal disease.

that there frequently supervene, violent Fevers, Diarrhœa, Dysentery, Hæmoptoe, an immobility of the jaws, and likewise a suffocation, and that too when the salivation has been most properly conducted; and after him the most skilful † LOCHER tells us the same.

That salivation is not a CERTAIN method of curing, appears from this, that there are many instances of patients, whose venereal complaints have returned after a first and second salivation had been properly conducted. Besides ASTRUC himself very candidly acknowledges, that neither gonorrhœas, condylomata, fistuli or pains in the bones, exostosis, scirrhus, caries, rhagades, obstinate ulcers, herpes, lichen, gummata, or cancers can be cured by a salivation, altho' most skilfully managed.*

Nor is salivation a CRITICAL discharge, for we have no observation to prove that a salivation coming of its own accord ever cured the venereal disease. Besides there are many observations, which prove that those infected with the venereal disease, have been radically cured without any salivation whatsoever. And the most healthy person by taking Mercury, will have that factor in his saliva, which attends salivation in the venereal disease.

† MAXIMIL. LOCHER, Observat. practice circa Luem. p. 12. * L. c. a. pag. 427, ad p. 453.

Nor is it NECESSARY for the cure of the venereal disease; for there are many examples of people who have been violently poxed, and yet have been thoroughly cured without salivation.

Since then it may be demonstrated by experiments that Mercury cures the venereal disease, only by destroying the virus, it will easily appear that salivation is by no means necessary for that purpose.

And Mercury, together with the venereal virus, may be more conveniently and more easily evacuated by the ordinary excretions of sweat, stool, and urine.

Since my method has neither the inconveniencies nor dangers of the salivating one, attending it, since it is more certain, and since it can be employed in every case, it easily appears how preferable it is to that of salivation.

We shall proceed to the other method.

CHAGOYNEAU and HAGENOT, two very eminent men, to avoid the inconveniencies and danger attending a salivation, applied externally the mercurial ointment in small quantities; and, that they might prevent salivation, they interposed the use of purgatives.

But even by this method, Mercury, contrary to expectation, although rubbed in small quantity, brought on a salivation that was with

difficulty restrained; and besides the practice was very inconvenient, for I could frequently perceive that the cure was both slow and imperfect, from the Mercury being so suddenly discharged out of the body by the purgative.

Let us now examine the third method.

Among all the mercurial preparations, calomel, sublimate corrosive, red præcipitate, and the various panacea are to be taken notice of; but all these are either acrid or poisonous, and therefore neither can, or ought to be given in large doses, and when given in small doses, they operate but slowly in destroying the venereal poison, from the small quantity of Mercury they contain.

Among these, the sublimate corrosive alone, as dissolved in spirit, is found the most efficacious; for its acrimony and poisonous nature is covered by the oil in the spirit, and when given properly with a demulcent decoction, it very seldom excites a salivation; the nauseous taste of the spirit may be corrected by a syrup, and for more weakly persons it may be prescribed diluted with water; and we most certainly learn from the experiments of **LOCHER**, and other very eminent persons, that in thousands of cases, this remedy has been attended with remarkable good effects, when given prudently, and continued for a length of time, and

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as I myself, for more than five or six years, during the last war, found from my regimental practice.

I shall not enquire into the other methods of giving Mercury, because they are without efficacy, or exploded from practice.——Thus æthiops and cinnabar, so much recommended by BOERHAAVE* internally in the cure of the venereal disease, are found to have no efficacy.—— Thus some join quicksilver with purgatives, others with balsam of Peru, turpentine, camphor, and sugar; by these various additions, the evacuating power of Mercury is increased, it is too soon discharged by stool, urine, or sweat, nor do these additions, even when frequently repeated, restrain salivation, nay even by these means Mercury directs its course sooner to this excretory.

From all these circumstances it will appear that the gummy mercurial is to be preferred to all the other preparations hitherto known; because, during its use, the inconvenience and dangers of a salivation are never, or but very seldom to be apprehended, because it can be taken safely into our system in very large and sufficient doses, because it circulates readily with our fluids, because it operates sooner upon the venereal poison, and may be safely employed in every case whatsoever.

* Chem. T. II. p. 432, and T. I. p. 578.

It may be proper to join the following corollaries to those conclusions already drawn :

1. Mercury alone is sufficient for destroying venereal poison.

2. Mercury, when topically applied to venereal parts, acts sooner and more certainly on the poison which topically exists in that part to which it is applied.

3. Therefore Mercury ought to be used both internally and externally at the same time.

4. Mercury more especially destroys the venereal virus in the solids of our body, and not the effects arising from such a virus. The diseases that remain after salivation sufficiently prove this.

5. Therefore, during and after the use of Mercury, other remedies are indicated, and ought to be prescribed for venereal patients, according to the variety of their symptoms.

Hence no one ought to censure me, because, according to circumstances, I frequently joined other medicines to the mercurial; but I will communicate the specific cure of every venereal disorder in another work.

CHAP.

C H A P. IV.

A new theory of the action of Mercury on the salivary glands.

OF ALL THE ANIMAL FLUIDS MERCURY HAS THE GREATEST AFFINITY WITH MUCUS.

Experiments 1, 2, 3, 4, 5, 6, evidently shew, that Mercury is very easily extinguished by it, and that it afterwards remains extinguished altho' diluted with water, and kept for some months; nor does the same succeed with blood, serum, the yolk, white of an egg, or animal gluten.

MERCURY, WHEN EXTINGUISHED BY GUM ARABIC, IS SIMILAR TO THAT WHICH IS EFFECTED BY UNITING IT WITH ANIMAL MUCILAGE, AND BY MEANS OF THIS MENSTRUUM IT MAY BE VERY READILY MIXED WITH THE OTHER FLUIDS OF OUR BODY. This is proved by Experiment 8.

MERCURY, WHEN TAKEN BY THE MOUTH, OR WHEN ABSORBED INTO THE BLOOD, BY BEING EXTERNALLY APPLIED, FIRST OF ALL MEETS WITH MUCUS IN THE THROAT.

For being thrown out by the aorta into the carotids, it meets with no mucous glands, but in the throat and cavities of the nose; being carried here, it joins itself to the mucus by the prin-

principle of affinity and adhesion, and is retained in these glands, which it would pass, if the attraction of the mucus did not prevent it.

Hence it is understood, why there is a congestion of fluids and tumor in the throat before a salivation. And it is evident that this by no means proceeds from the circulation alone, or the impetus arising from the quicksilver, but the reason why the Mercury adheres to these organs is to be sought for in the singular affinity which it has with mucus.

This being first necessarily explained, I shall now mention some other circumstances, that we may understand the theory of salivation.

ALL THE SECRETORY SYSTEM POSSESS A SPECIFIC IRRITABILITY, BY WHICH MEANS THEY ARE NOT EXCITED INTO GENERAL ACTION BY EVERY STIMULUS, BUT ONLY BY SOME PARTICULAR ONES.

This is proved by many observations, and may be taken as a truth. Thus cantharides more especially stimulates the urinary parts, and those of generation; emetics the stomach; purgatives, although injected into the veins of a dog, or externally applied to the abdomen of a child, will stimulate the intestines, and bring on Diarrhoea. The vapour from burning sulphur will irritate the nerves of the lungs, although it will not easily irritate the nose. The unfavoury juice of the beet, though void of acrimony

acrimony, will excite sneezing; * a glaring light will violently affect the eye, which produces no change in the rest of our body.

IT IS THEREFORE NOT REPUGNANT TO REASON TO SAY, THAT, BY THE SAME LAW, THE ORGANS THAT SECRETE MUCUS AND SALIVA ARE IRRITATED BY MERCURY, AS A SPECIFIC STIMULUS; SO THAT THE SECRETION OF BOTH BECOMES MUCH GREATER THAN IT WAS FORMERLY.

This opinion, besides being founded upon certain principles, corresponds exactly with effects. I see, however, an objection that may be offered, which is this: that although it be allowed that Mercury may be united and retained in the mucus of the glands of the throat, and affect these organs by its stimulus, it does not from hence appear, why there is so plentiful a discharge from the salivary glands, since Mercury is not so easily extinguished by saliva as by mucus.

This objection may be properly answered, and not from fancy, but from attending to the phenomena of nature.

A considerable flow of tears follow from a small grain of sand, falling into the eye; and this, by irritating the lachrymal gland; altho' the sand had not, nor could ever have

* Cl. Professor CRANTZ, Mat. Med. T. 1.

reached it. A copious flow of saliva will be produced, by the application of an acrid aromatic substance, to the end of the tongue, and thus the salivary glands are stimulated, altho' the stimulus be not applied to them, but to the papilla of the tongue.

From a nausea of the stomach, a spitting is brought on, altho' the cause be in a distant part, and the throat being irritated by a feather, a large quantity of saliva will be discharged. Altho' therefore Mercury be accumulated more in the mucous glands of the throat, than in the salivary, yet the latter may be very powerfully irritated by sympathy, so that the salivary secretion is even more increased than that of mucus.

THEREFORE THE CAUSE OF A SALIVATION FROM MERCURY, ARISES FROM ITS ADHERING TO THE MU-
COUS GLANDS OF THE THROAT, AND
HENCE THE SALIVARY GLANDS ARE
STIMULATED BY SYMPATHY.

Nor does it seem surprizing, that the salivary glands are even irritated by bland Mercury, in its simple state, and not rendered acrid by salts; for it is not necessary, that an irritating stimulus should have acrimony; the mild juice of the beet, irritates the nose, and excites violent sneezing. Warm insipid water irritates the heart and intestines, and ex-
cites

cites them into action, there is likewise a peculiar irritability in different parts of the human body, and there are likewise specific stimuli, which correspond to this.

MERCURY EXTINGUISHED BY GUM ARABIC CANNOT EXERCISE ITS SPECIFIC STIMULUS ON THE SALIVARY GLANDS.

All the practical observations related in chap. 2. prove this. I have known some persons who were very pitted, take a large quantity of calomel without salivation, and I have known two others, who having had salivation excited by other mercurials, upon the taking of gum arabic emulsion, have it lessened, and at last removed.

From whence we learn, how wonderful and unexpected properties arise from the mixture of different bodies. A simple mucilage destroys the specific stimulus of Mercury; while at the same time, its anti-venereal virtues are preserved! Hence the illustrious * VAN SWIETEN very properly prescribes for those who take his solution of sublimate corrosive, a large quantity of barley water, or of some such emollient decoction. These mucilages are the fittest for covering Mercury, so that it may not exert its stimulus on the salivary glands.

* In his letter to Cl. JOH. BENEVENUT, inserted comment. de rebus in scient. nat. & med. gestis, T. v. p. 717.

MERCURY EXTINGUISHED BY MUCUS
 PASSES MORE EASILY INTO THE BLOOD,
 EITHER BY THE PRIMÆ VIÆ, OR WHEN
 EXTERNALLY APPLIED, THAN CRUDE
 MERCURY NOT EXTINGUISHED.

For quicksilver swallowed in its crude
 state, escapes through the intestines, by its
 weight, nor does it adhere to them, and,
 although there is a large quantity of mucus, in
 the primæ viæ, yet Mercury is not so well ex-
 tingished by it, as to remain united in the
 manner it does, when thoroughly extinguished
 by the pestle of a mortar; every body must al-
 low the truth of this assertion. For the particles
 of Mercury thus mutually attract one ano-
 ther, and as long as this attraction is stronger,
 than the attraction with the mucus, there will
 be no extinction.

THE MUCOUS MERCURIAL CIRCULATES
 MORE EASILY AND EQUABLY
 THRO' THE VESSELS, THAN WHEN
 UNITED WITH A FATTY OINTMENT.

Mercury has a less affinity with fat, than
 with mucus. * Hence frequently when Mer-
 cury is united with fat, it makes its escape
 from it in the body, and takes its course to
 the glands of the throat, and excites sali-
 vation; or to the mucous glands of the in-
 testines, and excites diarrhæa, sometimes to

* Vid. exp. 6. & exp. 15.

the synovial glands causing a stiffness of the joints, more especially to the knees, where there are a much greater number of mucous glands. I have observed that the throat, the intestines, and the joints are chiefly affected by Mercury.

On the other hand, when Mercury is extinguished by mucus, it readily mixes with all the fluids of our body: and, therefore, safely circulates with them, thro' all the vascular system, and is equally distributed over the whole; nor is there any reason for its remaining in the mucous glands, while it is previously saturated with a sufficient quantity of mucus.

Hence likewise we understand why the mucous mercurial, even though taken in large quantity, does not salivate, and why its power of curing the venereal disease is more expeditious than that of all the other mercurial preparations, since it is so equably diffused through the whole mass of blood, and can be taken with impunity in a larger dose than any other. My observations, as well as those of others, confirm this.

BUT

**BUT HOW MERCURY ACTS ON THE
VENEREAL VIRUS, IN DESTROYING IT,
NO PERSON CAN DETERMINE, UNLESS
THE NATURE OF THIS VIRUS WAS PER-
FECTLY KNOWN.**

I am willing to confess my ignorance in this matter, and what I have advanced concerning the theory of salivation, I mean to be submitted to the judgment of eminent men, as hypothetical; and it will afford me pleasure, if any one will find out and demonstrate a better theory concerning the wonderful action of Mercury.

Mercurial

Mercurial Formulæ.

No. I. SIMPLE MERCURIAL SOLUTION.

R. Mercurii vivi depuratissimi, ʒj.

Gummi arabici, ʒij.

terantur invicem in mortario lapideo, addito medio cochleari aquæ fumarizæ, donec mercurius penitus dispareat in mucum.

Exacte subactis admisce sensim conterendo

Syrupi kermesini ʒss.

Aquæ fumarizæ ʒviij.

D. S. mane & vespere cochlearia duo.

No. II. BALSAMIC MERCURIAL SOLUTION.

R. Balsami Copaivæ

Gummi arabici ana ʒss.

terendo subigantur. Exacte subactis adde sensim conterendo

Syrupi kermesini ʒij.

Aquæ fumarizæ ʒij.

tota hæc solutio misceatur cum priori (No. I.) bene concusso vase denter mane & vespere cochlearia duo.

No. III. CAUSTIC SOLUTION for the CONDYLOMATA.

R. Aquæ fortis ʒj.

Mercurii vivi ʒij.

Plumbi simpl. ʒiss.

fiat leni calore solutio.

No. IV.

No. IV. MERCURIAL SYRUP.

R. Mercurii vivi 3fs.

Gummi arabici. 3fs.

terantur invicem in mortario lapideo addito
medio cochleari aquæ fumarizæ, donec mer-
curius disparëat in mucum,
sensim conterendo admisce

Syrupi violarum 3ij.

Aquæ florum sambuci 3j

D. S. pro infante cochleare coffeæ mane & ves-
pere.

No. V. MERCURIAL PILLS.

R. Mercurii vivi 3j.

Gummi arabici 3ij

Terantur invicem addito medio cochleari
aquæ in mucum.

Huic bene subacto addë

Extract. cicutæ 3j.

Pulveris liquiritiæ q. s.

m. f. pil. gr. ij. S. mane & vespere sex pro dosi.

No. VI. SIMPLE MERCURIAL OINT-
MENT.

R. Mercurii vivi

Gummi arabici aa 3 fs.

Subigantur addito cochleari aquæ in mucum.

Huic admisce

Unguenti nutriti recent. 3j. m. d. usui.

Subinde camphoram & saponem nigrum,
quando tumoribus induratis, subinde balsamum
quando ulceribus illud adhibui, addidi.

No. VII. SIMPLE MERCURIAL CERATE.

R. Mercurii vivi

Gummi arabici aa ʒss.

Subigantur addito cochleari aquæ in mucum.

Adde ceræ liquefactæ & butyri Cacao q. s.
pro formando cerato, d. usui.

F I N I S.